

CLAIMS

1. A polishing slurry comprising an abrasive comprising as a basic ingredient rare earth oxides containing cerium oxide, said polishing slurry further comprising an anionic surfactant and a nonionic surfactant and having a pH value of at least 11.

2. The polishing slurry according to claim 1, wherein the abrasive comprises at least 90% by mass, based on the abrasive, of the rare earth oxides.

3. The polishing slurry according to claim 1, wherein the rare earth oxides contain 50% to 90% by mass, based on the rare earth oxides, of cerium oxide.

4. The polishing slurry according to any one of claims 1 to 3, wherein the rare earth oxides are produced from rare earth carbonate as a starting raw material.

5. The polishing slurry according to any one of claims 1 to 4, wherein the abrasive is comprised of particles having a 50% cumulative average diameter (D50) in the range of 0.01 μm to 10 μm .

6. The polishing slurry according to any one of claims 1 to 5, wherein the abrasive is comprised of particles having a specific surface area in the range of 1 m^2/g to 50 m^2/g .

7. The polishing slurry according to any one of claims 1 to 6, wherein the anionic surfactant is at least one kind of surfactant selected from the group consisting of low-molecular-weight compounds and high-molecular-weight compounds, which are selected from carboxylic acid salts, sulfonic acid salts, sulfuric acid ester salts and phosphoric acid ester salts.

8. The polishing slurry according to any one of claims 1 to 7, wherein the nonionic surfactant is at least one kind of surfactant selected from the group consisting of polyoxyethylene alkyl phenyl ethers, polyoxyalkylene alkyl ethers and polyoxyethylene fatty acid esters.

9. The polishing slurry according to any one of claims 1 to 8, which further comprises at least one kind of liquid medium selected from the group consisting of water, monohydric alcohols having 1 to 10 carbon atoms, glycols, polyhydric alcohols having 1 to 10

carbon atoms, dimethyl sulfoxide, dimethylformamide, tetrahydrofuran and dioxane.

10. The polishing slurry according to any one of claims 1 to 9, which further comprises at least one kind of ingredient selected from the group consisting of phosphoric acid esters, cellulose ethers and water-soluble high-molecular-weight compounds.

11. A process for polishing a substrate characterized in that the polishing of the substrate is carried out by using the polishing slurry as claimed in any one of claims 1 to 10.

12. A process for producing a polished substrate comprising a step of polishing a substrate by the process as claimed in claim 11.

13. A polished substrate obtainable by the process as claimed in claim 12.

14. The substrate according to claim 13, which is selected from the group consisting of a glass substrate for optical lens, a glass substrate for optical disc, a glass substrate for plasma display, a glass substrate for liquid crystal, a color filter for liquid crystal TV, a glass substrate for LSI photomask and a substrate for magnetic disc.